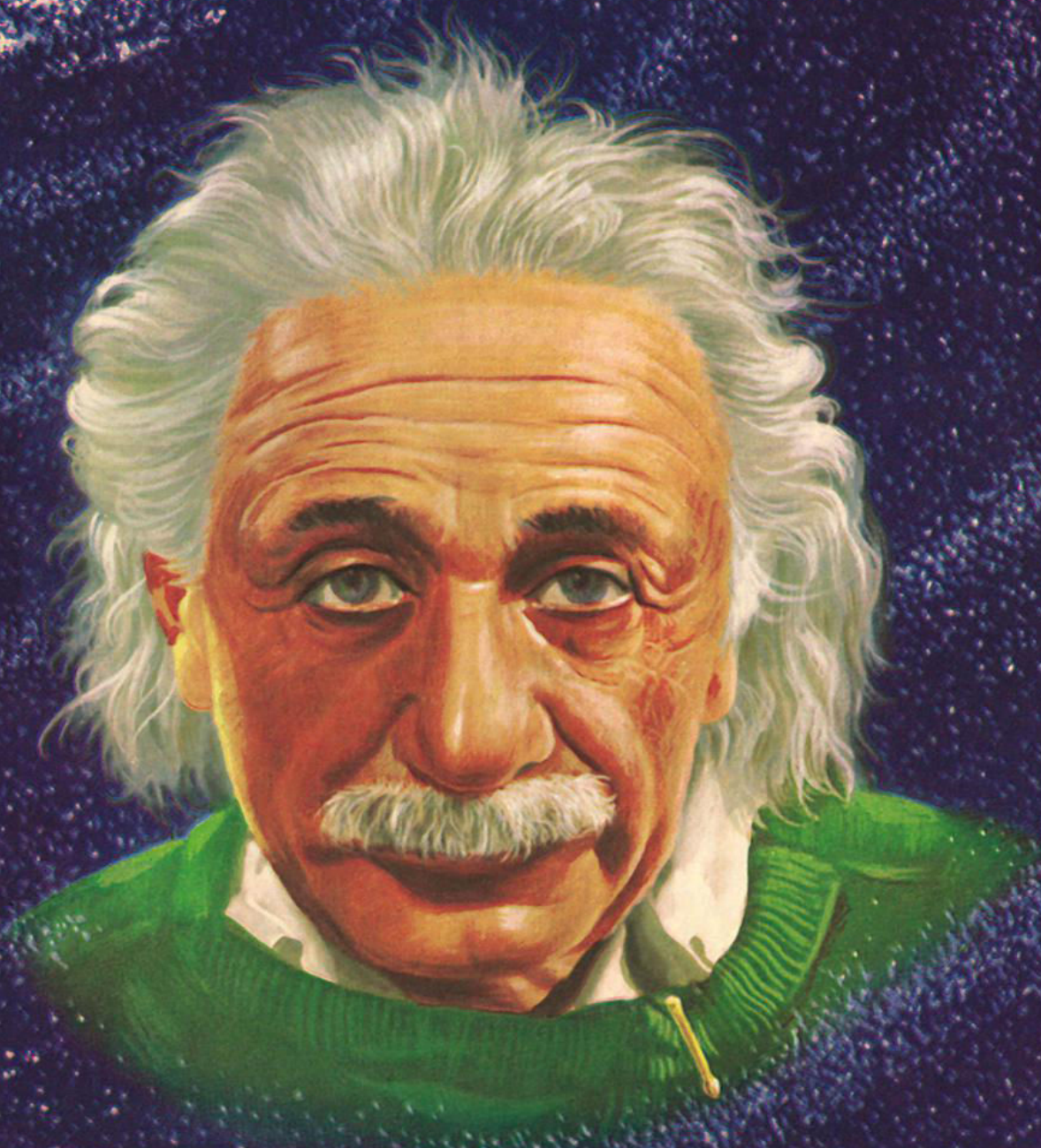




# ALBERT EINSTEIN

HE NEVER STOPPED QUESTIONING

Vol 777







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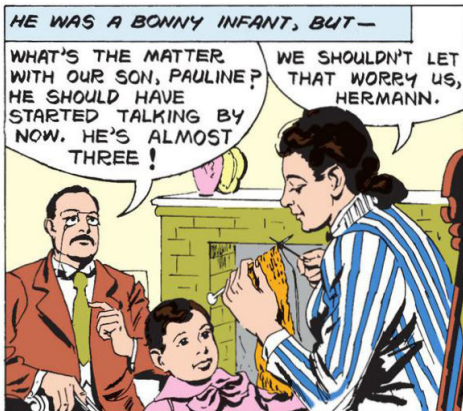
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# ALBERT EINSTEIN



ALBERT EINSTEIN WAS BORN ON MARCH 14, 1879 IN THE CITY OF ULM\* IN GERMANY.



HE WAS A BONNY INFANT, BUT —

WHAT'S THE MATTER WITH OUR SON, PAULINE? HE SHOULD HAVE STARTED TALKING BY NOW. HE'S ALMOST THREE!

WE SHOULDN'T LET THAT WORRY US, HERMANN.



SOME CHILDREN ARE SLOW LEARNERS. HE'LL START TALKING IN TIME.



WOULDN'T YOU ALBERT?

MA-MA!

IT WAS A GREAT RELIEF TO HERMANN WHEN ALBERT FINALLY BEGAN TO LISP HIS FIRST WORDS.

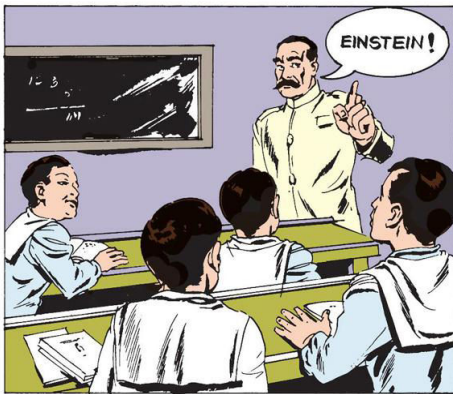


WHEN HE WAS SIX YEARS OLD, HE BEGAN TO ATTEND ELEMENTARY SCHOOL.

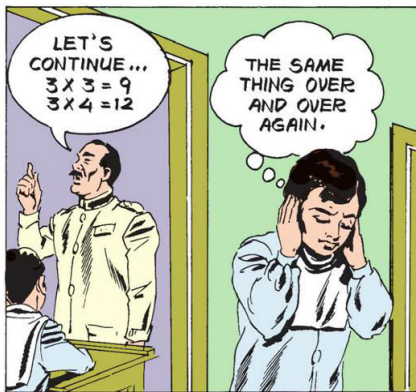
NOW REPEAT AFTER ME...  
 $3 \times 2 = 6$   
 $3 \times 3 = 9$

$3 \times 2 = 6$   
 $3 \times 3 = 9$

\* ULM IN WEST GERMANY







HOME WAS A REFUGE FROM HARSH TEACHERS AND SNEERING SCHOOLMATES. THERE HIS YOUNGER SISTER, MAYA, WOULD GREET HIM WITH A WARM HUG.

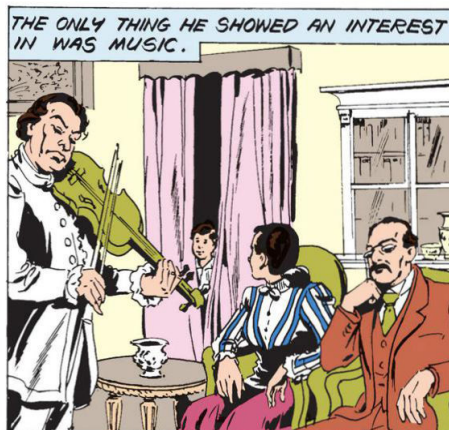
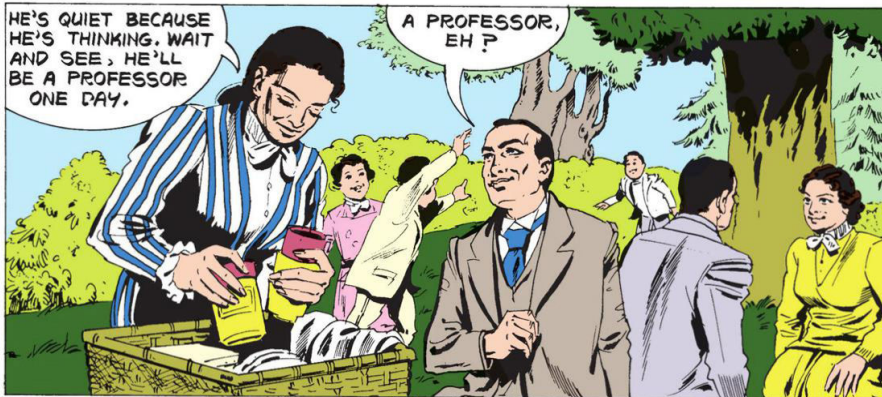


AND SOON HE WOULD BE SITTING DOWN TO A WHOLESOME MEAL WITH HIS MOTHER FUSSING OVER HIM.



THE YOUNG BOY LOVED THE COUNTRYSIDE. FORTUNATELY FOR HIM, THE EINSTEINS OFTEN WENT ON PICNICS AND OUTINGS WITH THEIR RELATIVES. ON ONE SUCH OCCASION...









ALBERT !

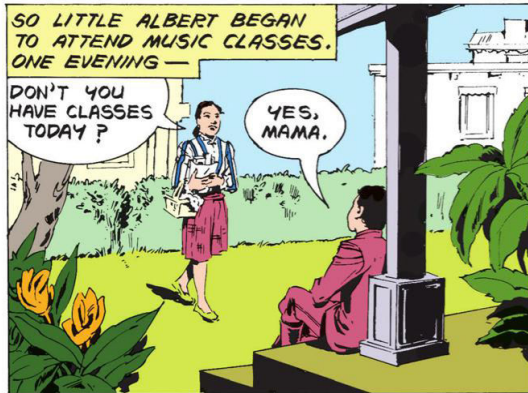


WHAT ARE YOU DOING THERE?  
WHY AREN'T YOU IN BED?

I WANTED TO  
LISTEN TO THE  
MUSIC, MOTHER.



HE REALLY LOVES MUSIC.  
I MUST ARRANGE FOR  
VIOLIN LESSONS FOR  
HIM.



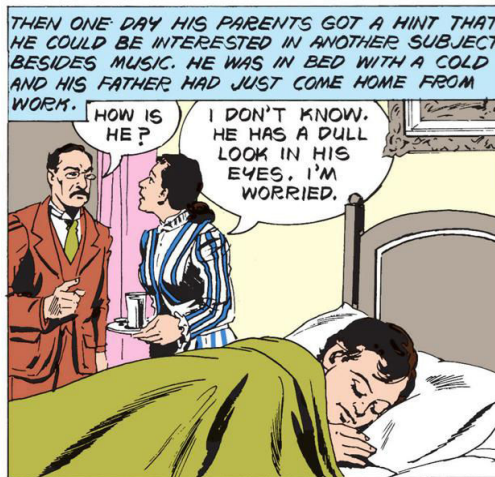
SO LITTLE ALBERT BEGAN  
TO ATTEND MUSIC CLASSES.  
ONE EVENING —

DON'T YOU  
HAVE CLASSES  
TODAY ?

YES,  
MAMA.



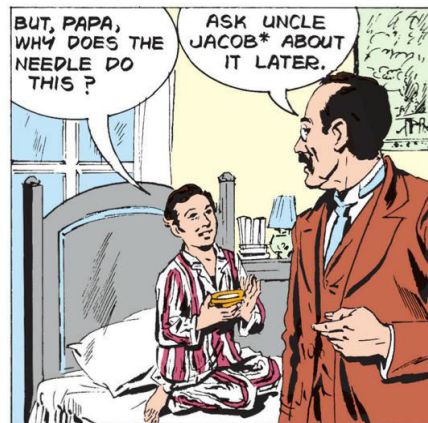
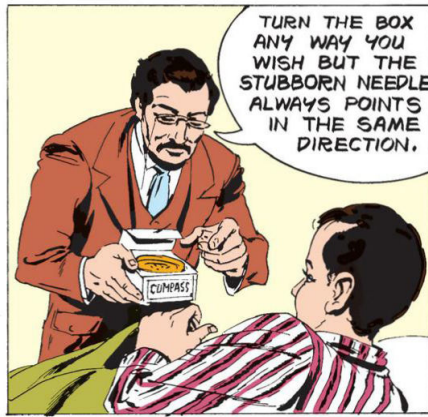
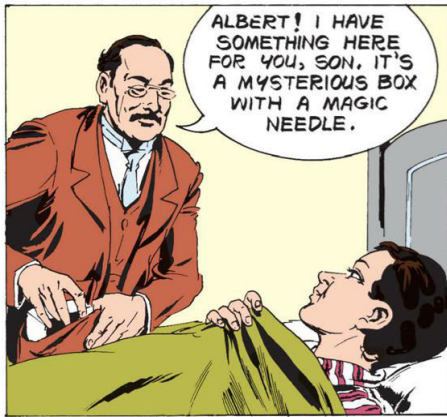
BUT THEY  
MAKE US PLAY  
THE SAME NOTES  
OVER AND OVER  
AGAIN. IT'S  
SO TIRESOME.



THEN ONE DAY HIS PARENTS GOT A HINT THAT  
HE COULD BE INTERESTED IN ANOTHER SUBJECT  
BESIDES MUSIC. HE WAS IN BED WITH A COLD  
AND HIS FATHER HAD JUST COME HOME FROM  
WORK.

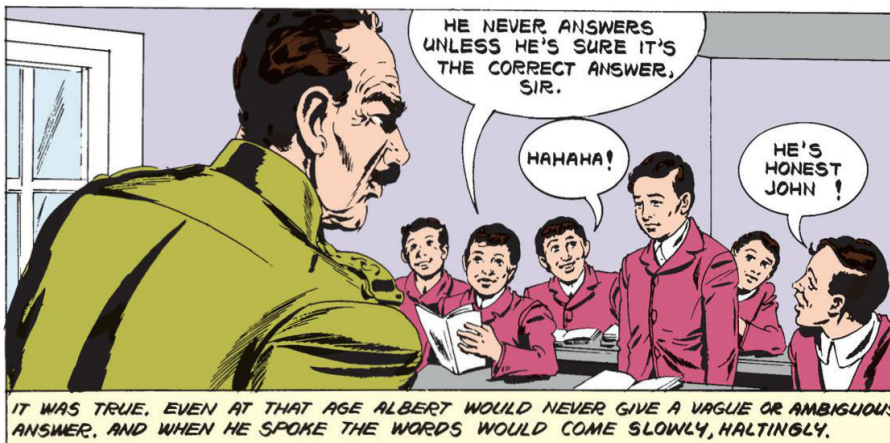
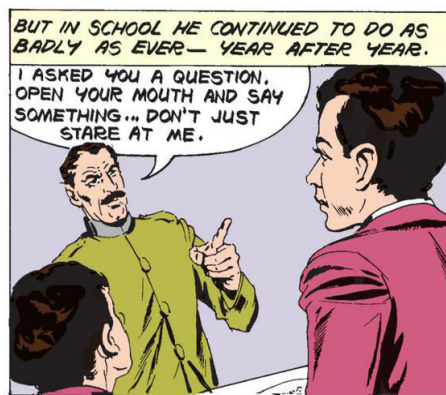
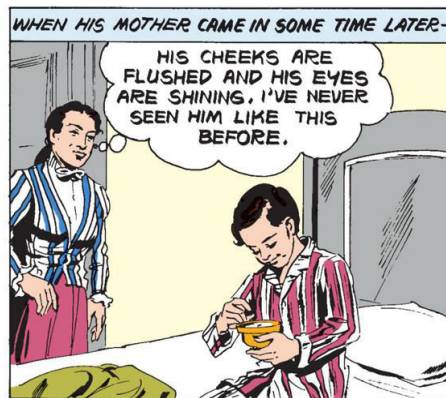
HOW IS  
HE ?

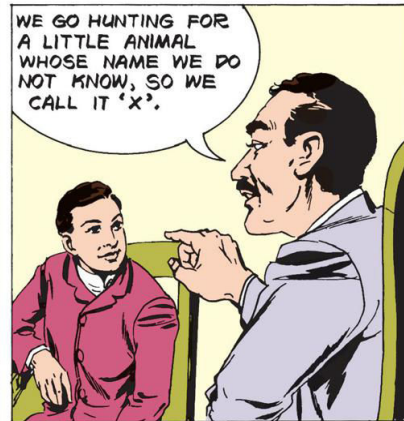
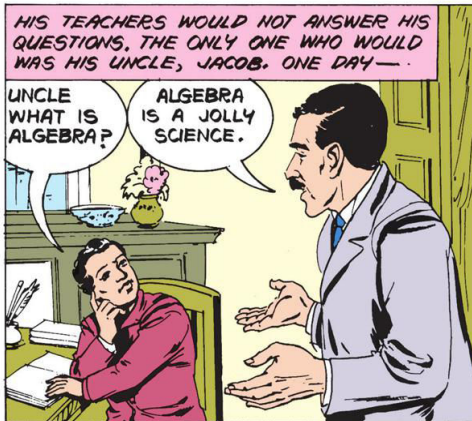
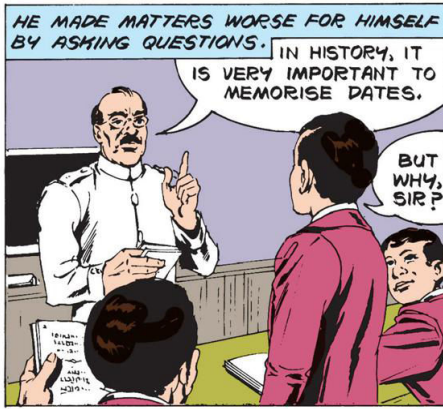
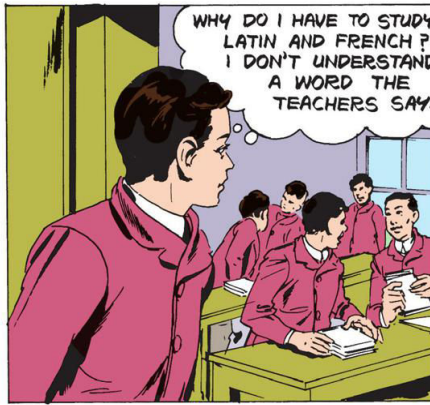
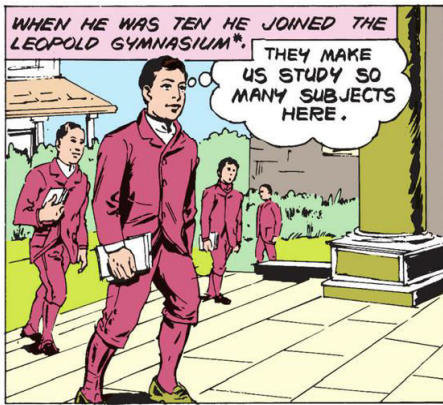
I DON'T KNOW.  
HE HAS A DULL  
LOOK IN HIS  
EYES. I'M  
WORRIED.



\*HERMANN'S YOUNGER BROTHER








\*SECONDARY SCHOOL

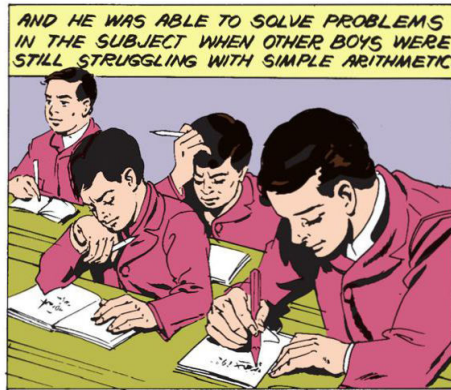


WHEN WE BAG OUR GAME, WE POUNCE ON IT AND GIVE IT ITS RIGHT NAME.




ALBERT WAS SO FASCINATED BY HIS UNCLE'S EXPLANATION THAT HE BEGAN TO STUDY ALGEBRA ON HIS OWN.

AND HE WAS ABLE TO SOLVE PROBLEMS IN THE SUBJECT WHEN OTHER BOYS WERE STILL STRUGGLING WITH SIMPLE ARITHMETIC.

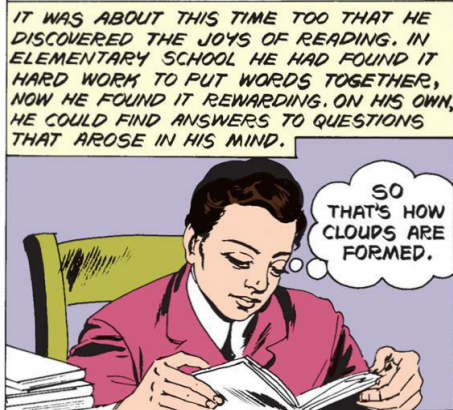


ONE DAY HE FOUND A BOOK ON GEOMETRY IN ONE OF THE UPPER CLASSROOMS.



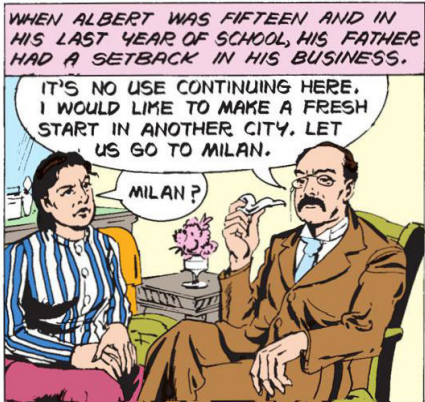
IN TWO WEEKS HE HAD MASTERED THE SUBJECT AND WORKED OUT ALL THE PROBLEMS IN THE BOOK.

IT WAS ABOUT THIS TIME TOO THAT HE DISCOVERED THE JOYS OF READING. IN ELEMENTARY SCHOOL HE HAD FOUND IT HARD WORK TO PUT WORDS TOGETHER, NOW HE FOUND IT REWARDING. ON HIS OWN, HE COULD FIND ANSWERS TO QUESTIONS THAT AROSE IN HIS MIND.



SO THAT'S HOW CLOUDS ARE FORMED.

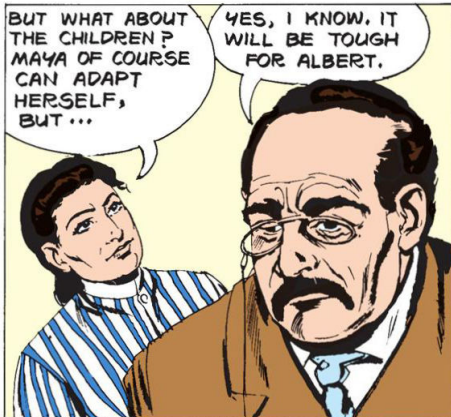
WHEN ALBERT WAS FIFTEEN AND IN HIS LAST YEAR OF SCHOOL, HIS FATHER HAD A SETBACK IN HIS BUSINESS.



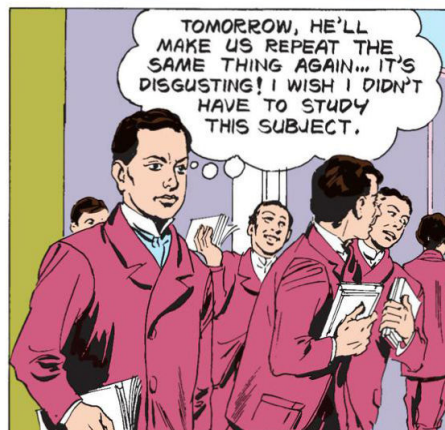
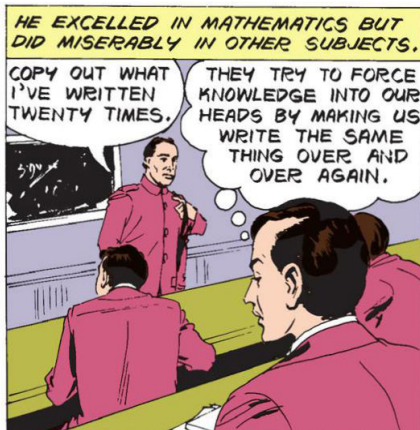
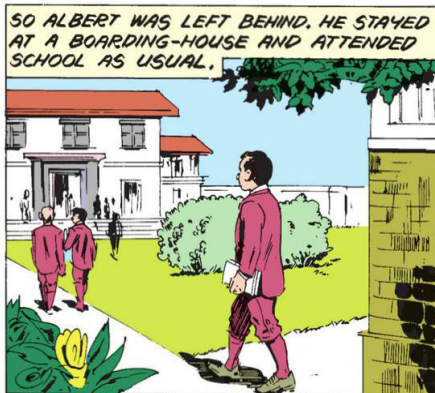
IT'S NO USE CONTINUING HERE. I WOULD LIKE TO MAKE A FRESH START IN ANOTHER CITY. LET US GO TO MILAN.

MILAN?

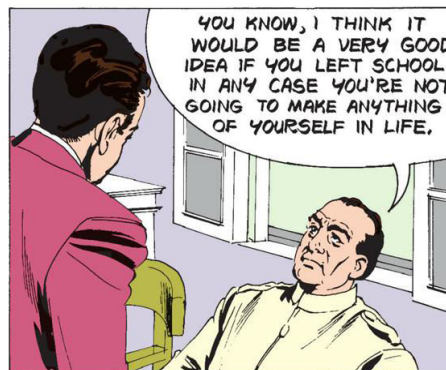
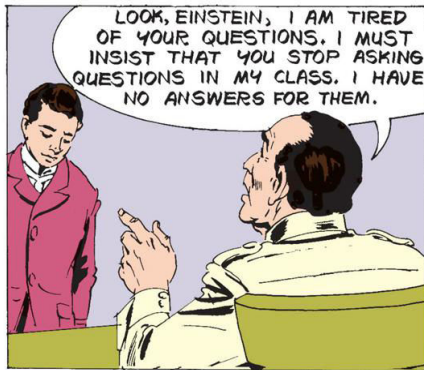
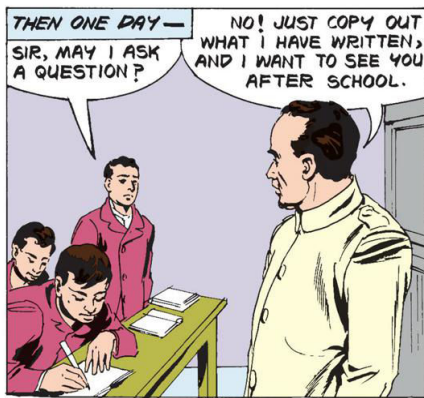
BUT WHAT ABOUT THE CHILDREN? MAYA OF COURSE CAN ADAPT HERSELF, BUT ...

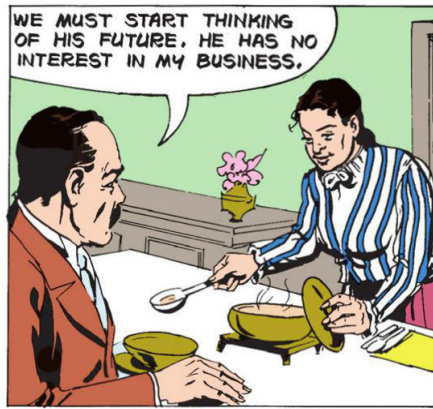


YES, I KNOW. IT WILL BE TOUGH FOR ALBERT.





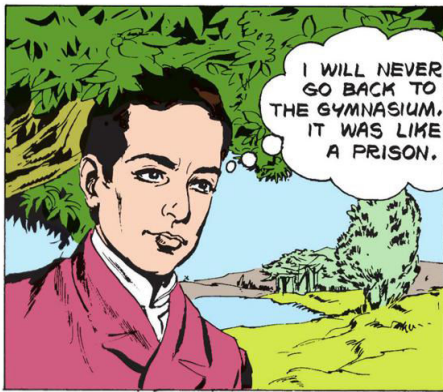




THE NEXT FEW MONTHS WERE HAPPY ONES FOR ALBERT; NO HARSH TEACHERS, NO INSENSITIVE CLASS-MATES, NO SCHOOL. HE WAS LEFT TO HIMSELF WITH THE WONDERFUL, WARM ITALIAN COUNTRYSIDE FOR COMPANY.







I WILL NEVER GO BACK TO THE GYMNASIUM. IT WAS LIKE A PRISON.



ONCE HE WENT TO THE CHURCH OF SANTA MARIA WITH HIS MOTHER. THERE -

MAMA, THIS PAINTING OF THE 'LAST SUPPER' IS STILL BEAUTIFUL BUT THE WONDERFUL COLOURS OF DA VINCI HAVE STARTED PEELING OFF.



THAT'S BECAUSE THE PAINTING IS FOUR HUNDRED YEARS OLD.

NO, MAMA, THERE ARE MUCH OLDER PAINTINGS WITH THEIR COLOURS INTACT.

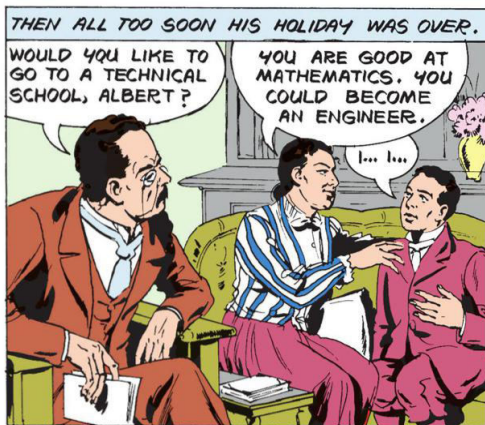


DA VINCI WAS FOND OF EXPERIMENTING. HE MUST HAVE RISKED USING UNTRIED NEW COLOURS.

AND SEE WHERE IT GOT HIM. PEOPLE SHOULD STICK TO TRIED AND TESTED WAYS.



MAMA DOES NOT REALISE THAT IT IS MEN LIKE DA VINCI WHO BRING ABOUT PROGRESS IN THE WORLD. NOT PEOPLE WHO DO THINGS IN TRIED AND TESTED WAYS.

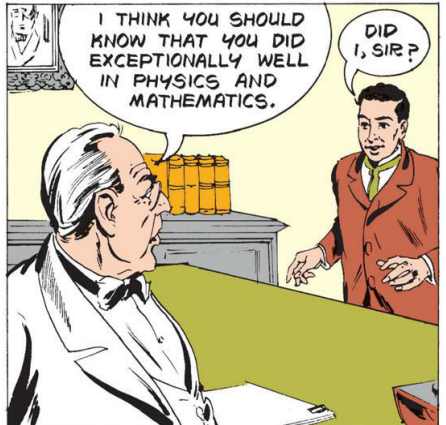
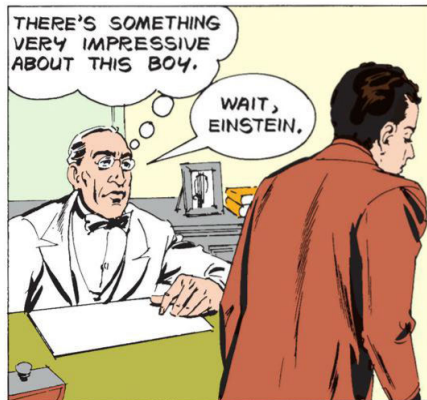
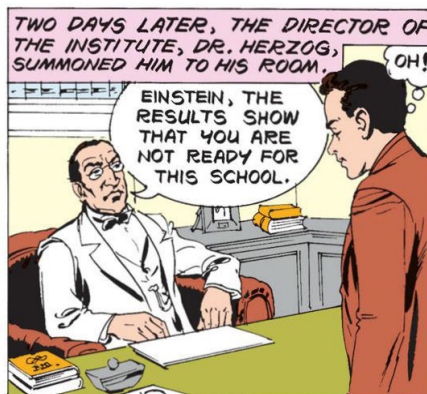
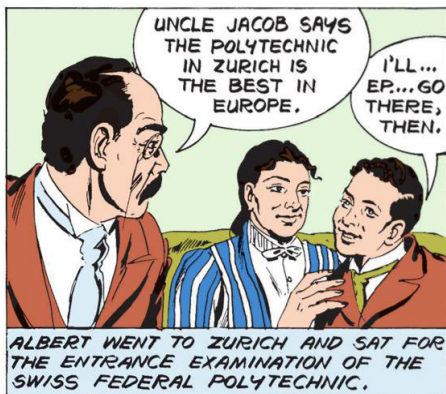


THEN ALL TOO SOON HIS HOLIDAY WAS OVER.

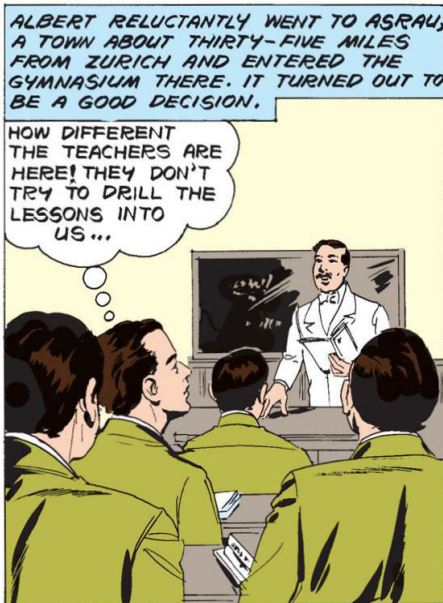
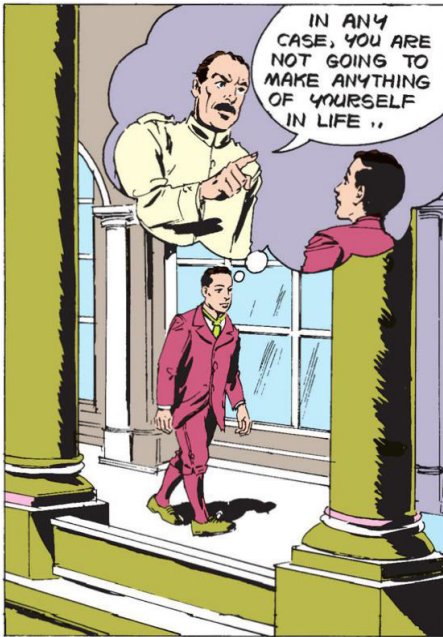
WOULD YOU LIKE TO GO TO A TECHNICAL SCHOOL, ALBERT?

YOU ARE GOOD AT MATHEMATICS. YOU COULD BECOME AN ENGINEER.

... ..







AS SOON AS HE GOT HIS DIPLOMA, HE WENT BACK TO THE SWISS FEDERAL POLYTECHNIC. AND THIS TIME HE WAS ADMITTED. A RICH UNCLE AGREED TO SEND HIM A HUNDRED FRANCS EACH MONTH TO COVER HIS EXPENSES. HE WAS NOW SEVENTEEN YEARS OLD.



AT THE POLYTECHNIC ALBERT BEGAN TO DEVOTE MOST OF HIS TIME TO PHYSICS.



I THOUGHT I WOULD FIND YOU HERE. WHY DID YOU SKIP THE MATHEMATICS LECTURE?

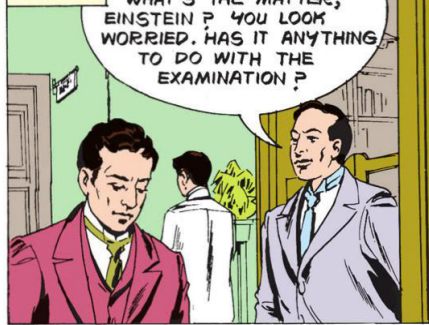


I WANTED TO FINISH THIS EXPERIMENT, GROSSMAN.

BESIDES, I'M BEGINNING TO FIND MATHEMATICS TEDIOUS... TOO MANY FORMULAE TO MEMORISE.

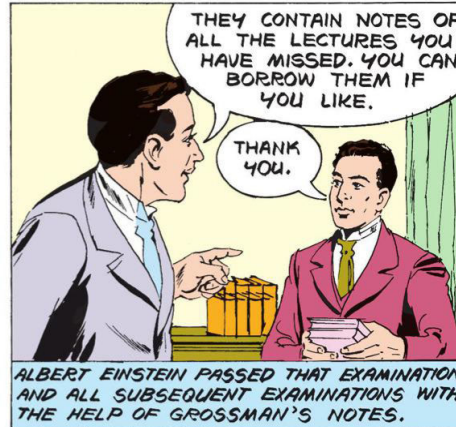


HE COMPLETELY NEGLECTED THE OTHER SUBJECTS WHICH HE HAD TO STUDY. THEN WHEN THE YEARLY EXAMINATION DREW NEAR—

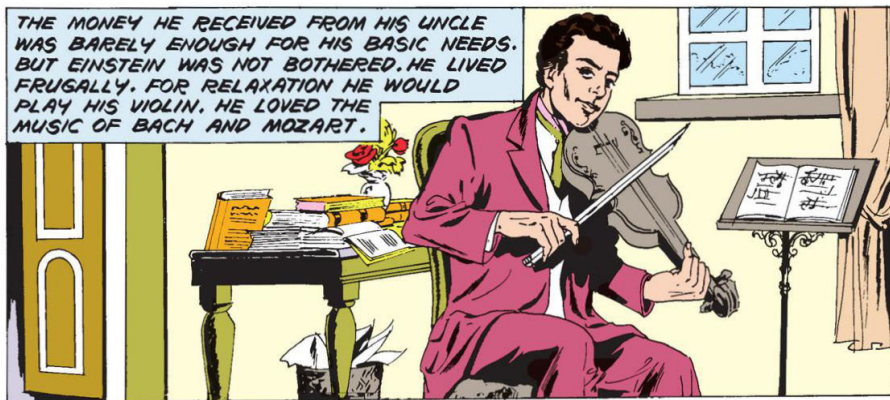


WHAT'S THE MATTER, EINSTEIN? YOU LOOK WORRIED. HAS IT ANYTHING TO DO WITH THE EXAMINATION?

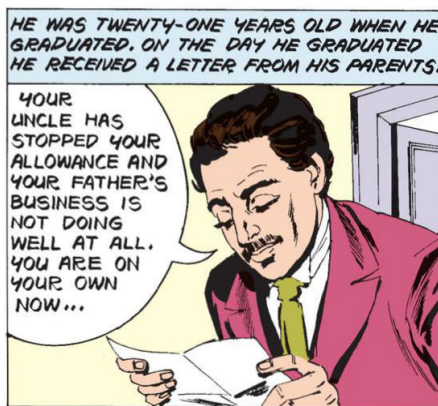
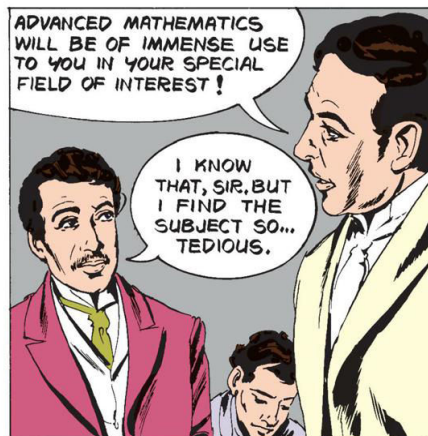
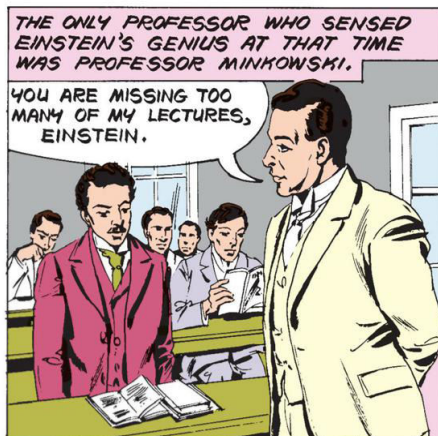




ALBERT EINSTEIN PASSED THAT EXAMINATION AND ALL SUBSEQUENT EXAMINATIONS WITH THE HELP OF GROSSMAN'S NOTES.







BESIDES HIS RELIGION, PERHAPS IT WAS HIS APPEARANCE WHICH SPOILT HIS CHANCES. HE WORE A SHABBY SUIT AND NEVER BOTHERED TO COMB HIS HAIR OR BRUSH HIS SHOES.



IT WAS MARCEL GROSSMAN AGAIN, WHO CAME TO HIS RESCUE.

MY FATHER HAS ARRANGED AN INTERVIEW FOR YOU WITH THE DIRECTOR OF THE PATENT OFFICE AT BERNE.



IT'S A MINOR JOB, EINSTEIN. I'M SORRY, IT'S ONLY BECAUSE YOU NEED WORK SO BADLY THAT...

A JOB IS A JOB, MARCEL. I'LL GO AT ONCE.



YOU'LL NEED MONEY FOR YOUR TRAIN FARE... TAKE THIS.

I CANNOT THANK YOU ENOUGH.



AT THE PATENT OFFICE THEY NEEDED A MAN TO SEE IF THE INVENTIONS WHICH WERE SUBMITTED TO THEM WERE WORKABLE.

ARE YOU A CITIZEN OF SWITZERLAND?

YES, SIR. I AM GERMAN BORN BUT A NATURALISED SWISS.



HE GOT THE JOB AND WAS A GREAT SUCCESS AT IT.

WE HAVE NEVER HAD ANYONE LIKE HIM BEFORE. HE GOES INSTINCTIVELY TO THE HEART OF THE MOST COMPLICATED PLAN.





HE WOULD FINISH THE DAY'S WORK IN TWO OR THREE HOURS AND SPEND THE REST OF THE TIME ON PURE SCIENCE.

IF THE SPEED OF LIGHT REMAINS THE SAME, IRRESPECTIVE OF THE SPEED OF THE SOURCE OF LIGHT, THEN THE SPEED OF LIGHT IS A CONSTANT AND...



GRADUALLY HIS STRAY THOUGHTS AND UNDIRECTED EFFORTS BEGAN TO FOCUS ON STRANGE NEW NOTIONS ABOUT TIME, SPACE, MATTER AND ENERGY.



HE HAD MARRIED MILEVA SOON AFTER HE GOT THE JOB. HIS FIRST SON WAS BORN IN 1904.

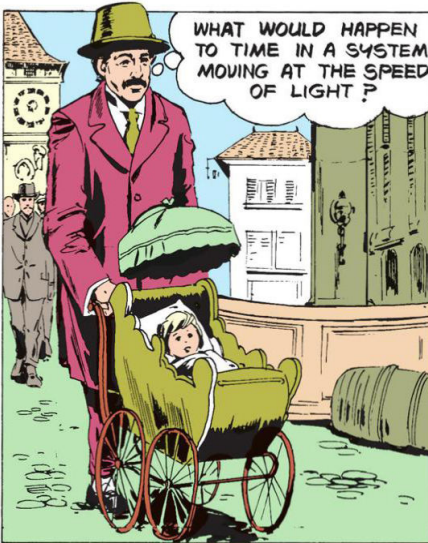
IT'S TIME TO TAKE THE BABY OUT.

DOES TIME ALWAYS MOVE FORWARD?

YES, DEAR.



WHAT WOULD HAPPEN TO TIME IN A SYSTEM MOVING AT THE SPEED OF LIGHT?



HE BEGAN TO DEVOTE EVERY SPARE MOMENT TO HIS SCIENTIFIC WORK.

FINALLY IN 1905, HE WROTE OUT SIMPLY AND CLEARLY THE IDEAS HE HAD DEVELOPED ABOUT TIME, SPACE AND THE UNIVERSE AND MAILED THE REPORT TO THE SCIENTIFIC JOURNAL 'ANNALEN DER PHYSIK'\*,

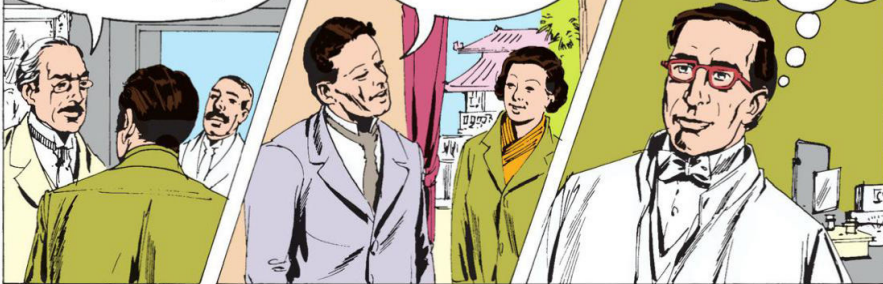


HIS PAPERS WERE PUBLISHED AND CREATED A SENSATION AMONG SCIENTISTS ALL OVER THE WORLD.

WHO IS THIS MAN? HOW'S THAT WE'VE NEVER HEARD OF HIM BEFORE?

HIS THEORY OF RELATIVITY SHATTERS ALL THE OLD BELIEFS.

SO WHERE DOES THIS LEAVE NEWTON?



EINSTEIN SUDDENLY BECAME THE FOCUS OF ATTENTION IN SCIENTIFIC CIRCLES. THE UNIVERSITY OF ZURICH OFFERED HIM A JOB AS AN ASSISTANT PROFESSOR.



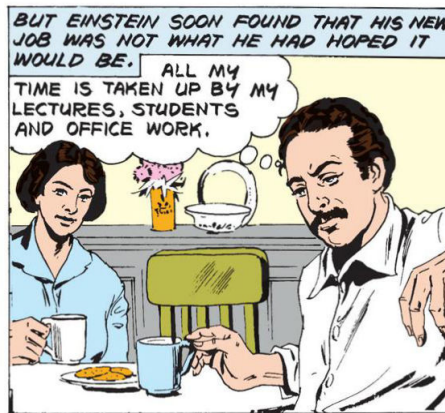
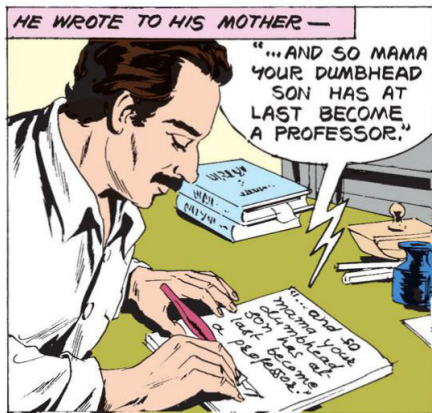
I HAVE A GOOD JOB AT THE PATENT OFFICE. IT WOULD BE A PITY TO LEAVE IT...

...BUT I'LL HAVE RESEARCH FACILITIES AT THE UNIVERSITY AND MORE TIME FOR MY WORK.

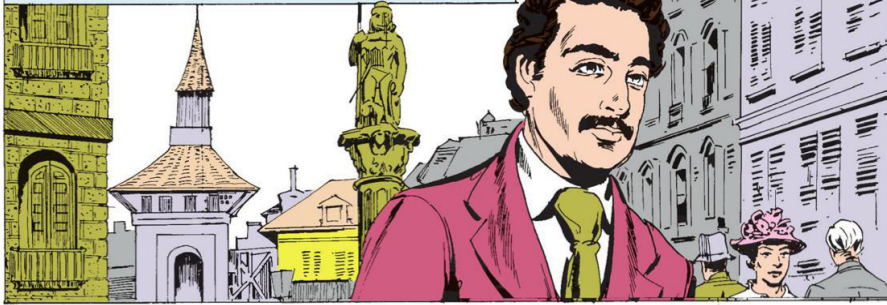


\* A PRESTIGIOUS RESEARCH JOURNAL

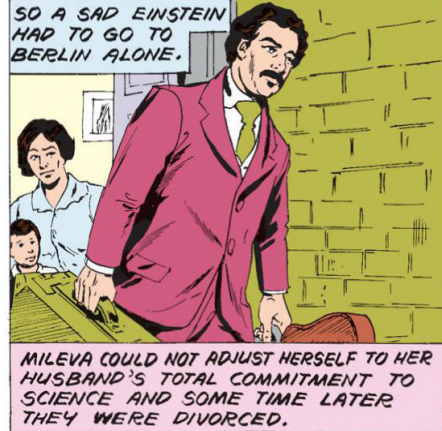




HE SUBSEQUENTLY SERVED AS A PROFESSOR AT THE UNIVERSITY OF PRAGUE AND THEN AT HIS ALMA MATER, THE SWISS FEDERAL POLYTECHNIC SCHOOL. HE CHANGED JOBS IN EACH CASE EITHER IN THE HOPE OF GETTING MORE TIME FOR HIS RESEARCH OR TO PLEASE MILEVA.

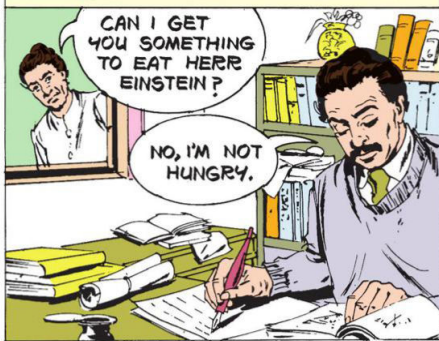


THEN IN 1914 —





IN BERLIN HE RENTED A ROOM AND IMMERSSED HIMSELF IN HIS WORK.



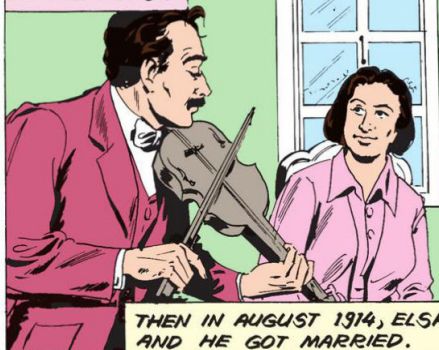
WHAT A STRANGE MAN! HE DOESN'T CARE HOW HE LOOKS OR HOW HE DRESSES OR WHAT AND WHEN HE EATS.



ONE DAY HE VISITED HIS UNCLE RUDY WHO WAS LIVING IN BERLIN AT THAT TIME. THERE HE MET HIS COUSIN, ELSA, WHO WAS NOW A WIDOW WITH TWO DAUGHTERS.



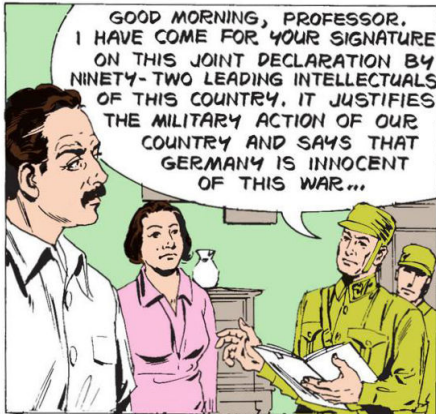
EINSTEIN BECAME A REGULAR VISITOR TO THE HOUSE.



THAT SAME YEAR HE PUBLISHED AN IMPORTANT EXTENSION TO HIS THEORY OF RELATIVITY, BUT THE WORLD WAS TOO BUSY TO NOTICE. THE FIRST WORLD WAR HAD BROKEN OUT IN EUROPE.

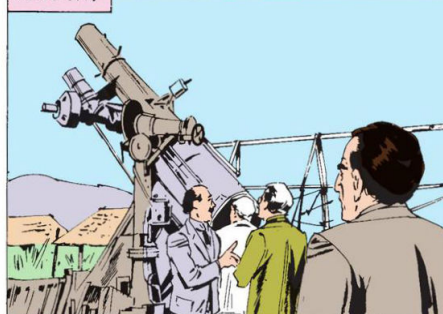


EINSTEIN FOUND HIMSELF IN BERLIN, THE CAPITAL OF A COUNTRY ENGAGED IN WAR.

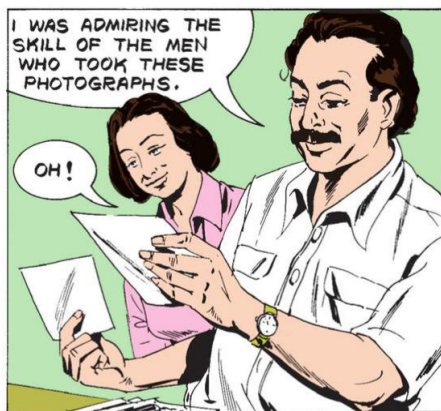
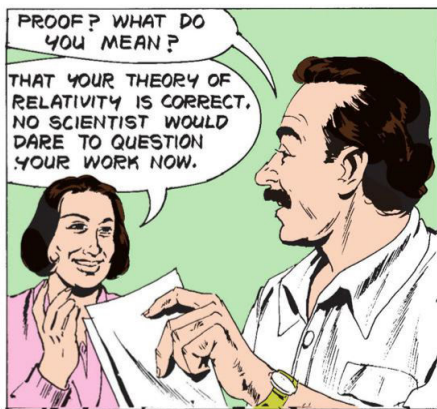
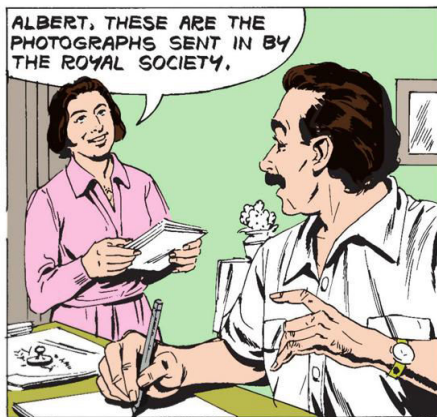


EINSTEIN'S BOLD STAND EARNED HIM THE DISPLEASURE OF THE GOVERNMENT. THE GERMANS BEGAN TO LOOK UPON HIM WITH SUSPICION.

THE WAR ENDED IN 1918 AND IN THE FOLLOWING YEAR HIS THEORY OF RELATIVITY WAS SUPPORTED BY THE FINDINGS OF ASTRONOMERS OF THE ROYAL SOCIETY OF LONDON.







THE WORLD, SICK OF WAR AND DESTRUCTION TURNED ENTHUSIASTICALLY TOWARDS THE SCIENTIST WHO HAD OPENED NEW VISTAS IN SCIENCE. MANY AWARDS CAME HIS WAY. THEN IN 1922 HE WAS AWARDED THE MOST PRESTIGIOUS ONE OF THEM ALL.



GERMANY WAS PROUD OF HIM NOW AND IN THE NEXT FEW YEARS, EVERY TOURIST WHO CAME TO GERMANY WANTED TO SEE THE SCIENTIST.



BUT SLOWLY CONDITIONS IN GERMANY BEGAN TO DETERIORATE AGAIN. ANTI-SEMITISM RAISED ITS UGLY HEAD IN THAT COUNTRY...

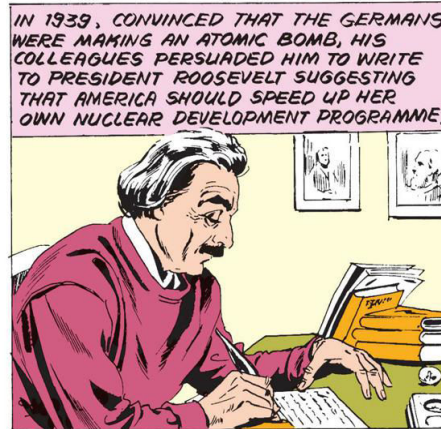
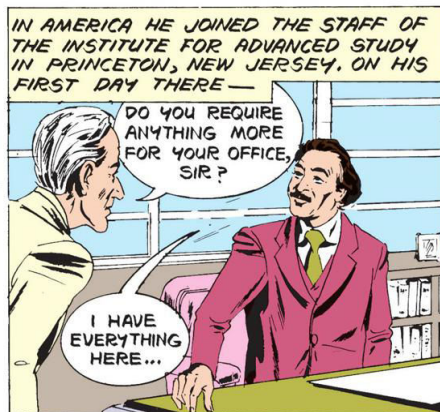


...AND EINSTEIN, WHO HAD IDENTIFIED HIMSELF CLOSELY WITH HIS COMMUNITY, BECAME ONE OF THE TARGETS OF THE NAZIS.

IN 1933 THE SCIENTIST HAPPENED TO BE IN CALIFORNIA ON A LECTURE TOUR. WHILE HE WAS THERE —





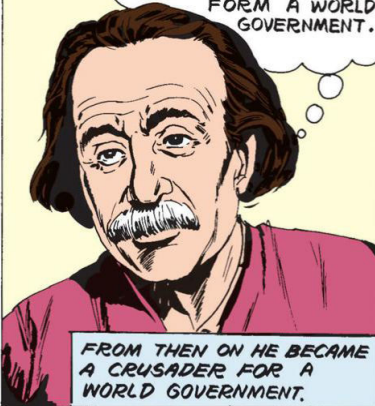


ON AUGUST 6, 1945, AMERICA DROPPED THE FIRST ATOMIC BOMB IN HUMAN HISTORY ON HIROSHIMA WITH DEVASTATING EFFECT.



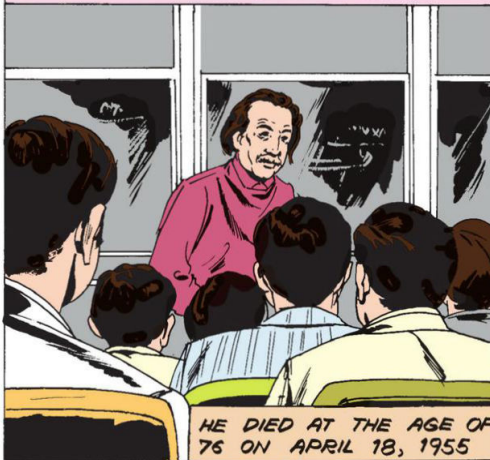
EINSTEIN WAS SHOCKED. HE HAD NEVER REALLY EXPECTED ANY COUNTRY TO ACTUALLY USE A NUCLEAR WEAPON.

THE ONLY WAY TO PREVENT SUCH A TRAGEDY FROM OCCURRING AGAIN IS TO FORM A WORLD GOVERNMENT.



FROM THEN ON HE BECAME A CRUSADER FOR A WORLD GOVERNMENT.

HIS LAST YEARS WERE SPENT IN TEACHING AND GUIDING YOUNGSTERS AND IN WORKING ON HIS UNIFIED FIELD THEORY WHICH WAS AN ATTEMPT TO EXPLAIN ALL THE PHYSICAL PHENOMENA USING A SINGLE THEORY.



HE DIED AT THE AGE OF 76 ON APRIL 18, 1955

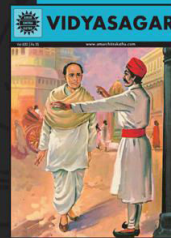
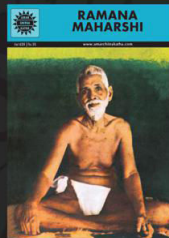


## ALBERT EINSTEIN

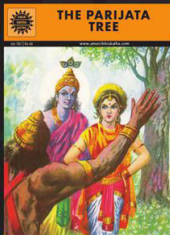
When Albert was very young, his teachers and parents despaired about his apparent lack of interest in studies. To top it, he had speech difficulties and was vague and inattentive. Albert hated the kind of rote learning he was obliged to do in school – memorising dates and texts.

But as he grew older, it soon became clear that Albert was no ordinary person. 1905 is often termed his "miracle year", the year he published not one but four entirely new papers, on four completely different topics. He became, overnight, the most famous scientist of his generation.

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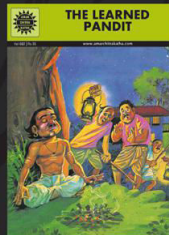
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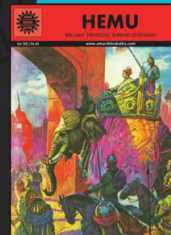
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- NARAYAN MURTHY, CHIEF MENTOR, INFOSYS

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